

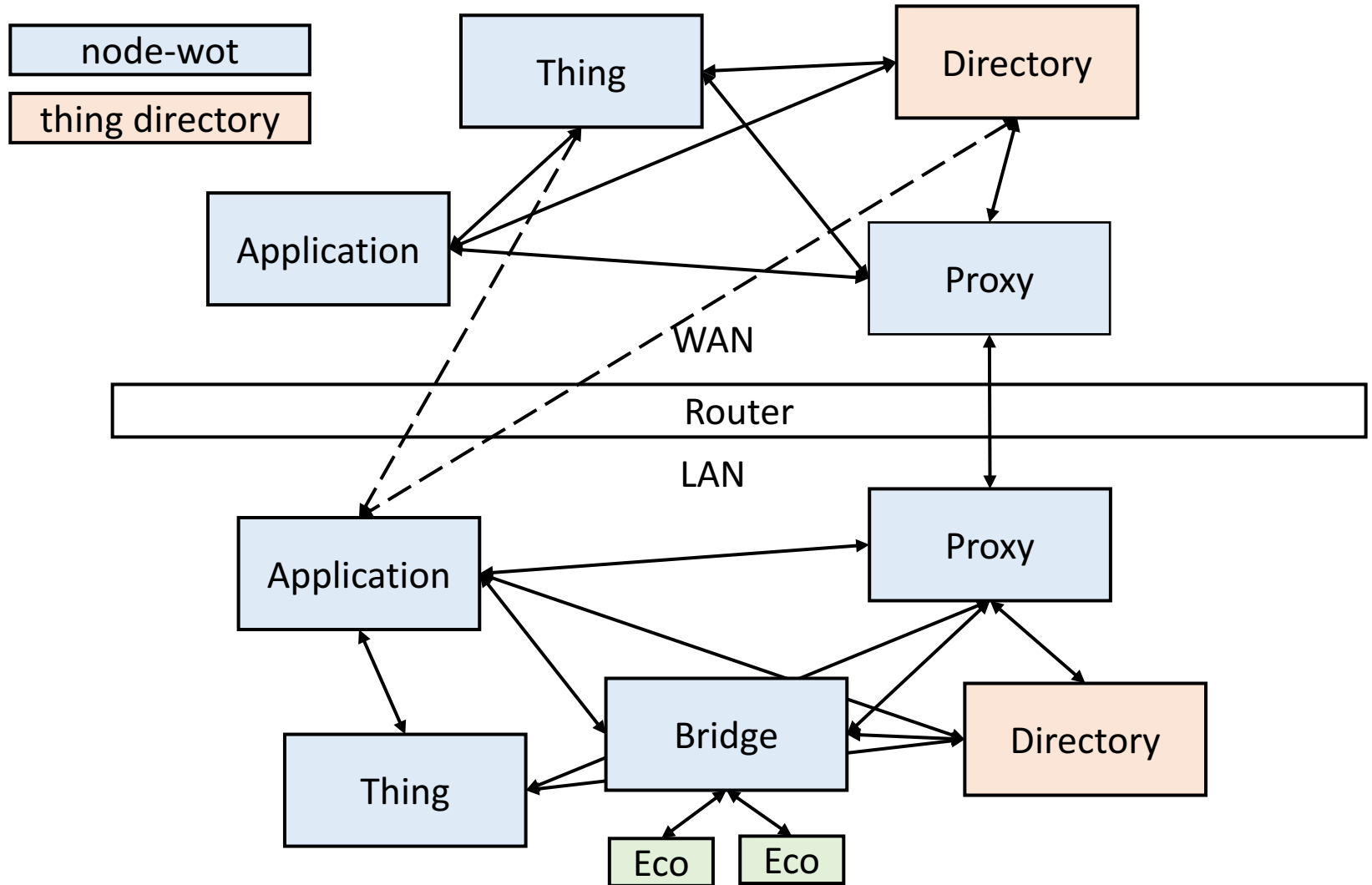
WoT Plugfest Planning

Bundang Korea

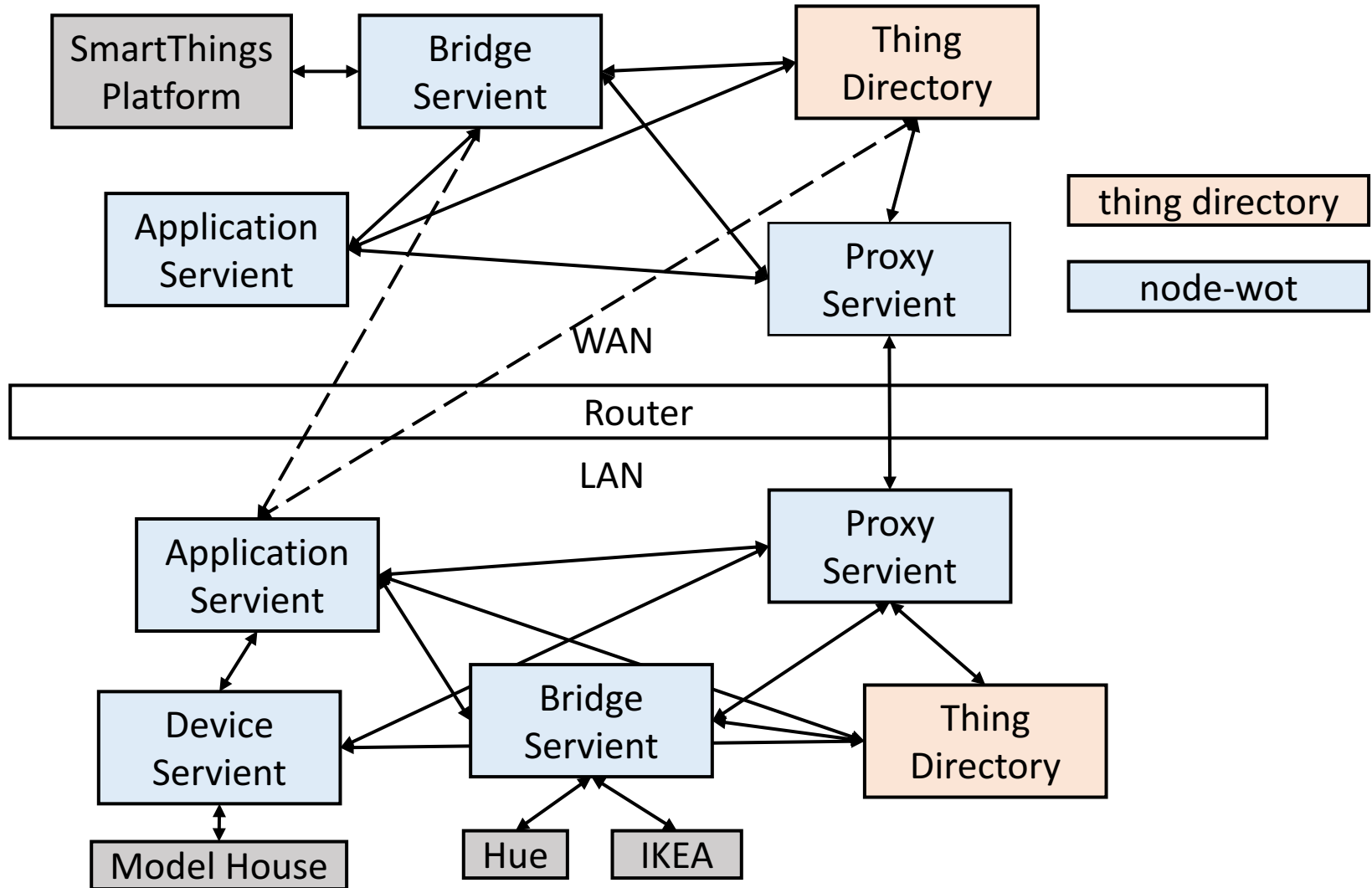
WoT Plugfest vs. WISHI Hackathon

- W3C WoT Plugfest
 - June 30-July 1
 - Testing WoT Components, formats, and protocols
 - Design Patterns as Use Cases
- WISHI Hackathon
 - July 14-15
 - Testing Semantic Interoperability
 - Design Patterns as variables
 - WoT Components as Infrastructure
 - Other components, formats, and protocols

System Architecture



SmartThings



Protocol Bindings

- New experimental patterns
- Dynamic action resource and output format
- Events over websockets
- Events using webhooks
- Events using eventsource
- Use eventsource as event multiplexing subprotocol
- URI templates
- Some support for new binding patterns in node-wot?

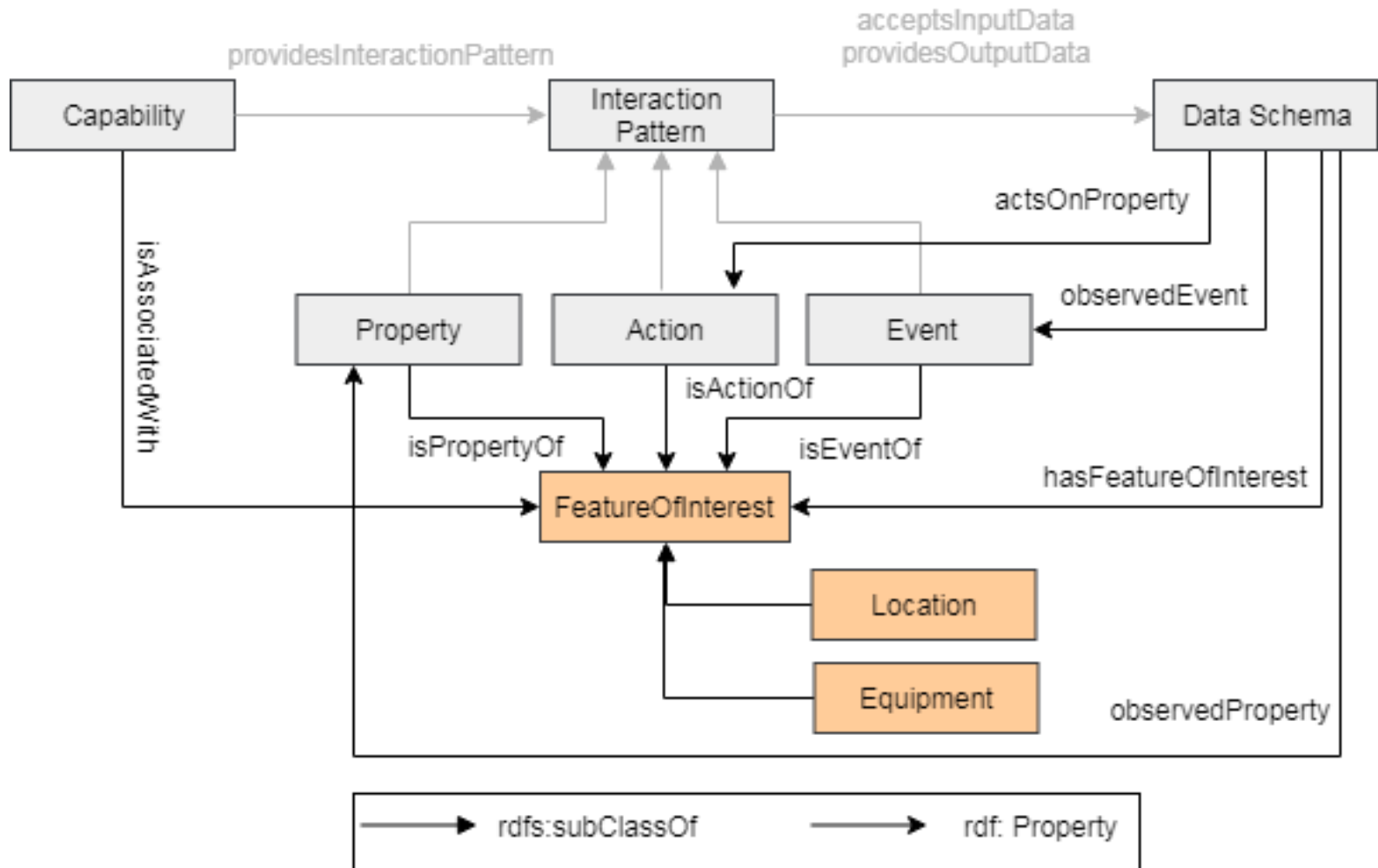
Semantic Annotation

- iot.schema.org definitions
- Capability + Interaction + Datashape
- Feature of Interest – concept from SSN
- Integrated with W3C Thing Description, Thing Directory
 - Capability uses @type annotation in TD
 - Fol uses TD annotation - experimental

Feature of Interest

- Things in the physical world that are the target of sensing or actuation
- Things that are properties of a Feature of Interest, e.g. room air temperature
- Temperature as a property of a Fol aligns with temperature as an Observed Property in sensing, which is the subject of an `iot.schema` capability
- Interactions defined by `iot.schema` therefore act on properties of a feature of interest

Feature Of Interest Pattern



Feature of Interest Integration

- Annotation pattern for TD
- Prototype vocabulary at iot.schema.org
- Support for query in Thing Directory

Feature of Interest Annotation

- Does annotation point to an instance or a concept?
- isAssociatedWith, isActionOf, actsOn, isPropertyOf
- Add links with annotation to the TD top level
- Add triples to the TD (any level) that map to the RDF propertytypes
- Adding triples to TD needs JSON keywords that map to RDF identifiers

TD Example using Fol triples

```
{
  "name": "My Lamp",
  "type": "thing",
  "@type": ["iot:lamp", "iot:BinarySwitchCapability"],
  "description": "A web connected lamp",
  "iot:isAssociatedWith": ["iot:LivingRoomLocation"],
  "properties": {
    "on": {
      "type": "boolean",
      "description": "Whether the lamp is turned on",
      "href": "/things/lamp/properties/on",
      "iot:actsOn": ["iot:Illumination"], //property of foi
    },
  },
},
```